THE GREAT LOBSTER PROBLEM

BY
SAM
LOYD.

Herein You Are Required to Find Out the Exact Cost of the "After the Play" Delicacy at the Fisherman's Rate.

WITH the advent of the crustacean season, when the mollusca ostraedae on the half-shell "R" in season, and, the macurous decapodons is invitingly billed to make its Fall debut in "a live broil," I am called upon by a fair correspondent to quote a poetical allusion to the lobster, and also to give the origin of what was once a very familiar saying: "As difficult as to give the first cost of the lobster."

The first of the queries is somewhat difficult, owing probably to my limited poetical repertoire and the meagre recognition which the poets have bestowed upon such a popular character.

I can find but one allusion to the lobster in any book that comes handy, and as it is not much to the point, might possibly be introduced into a medley of quotations from other authors for the information of our fair correspondent:

"I only know she came and went   (Lowell.)
Like troutlets in a pool;   (Hood.)
She was a phantom of delight,   (Wordsworth.)
And I—was like a fool.   (Eastman.)
One kiss, dear maid, I said, and sighed,   (Coleridge.)
Out of those lips unshorn!   (Longfellow.)
She shook her ringlets round her head,   (Stoddard.)
And laughed in merry scorn.   (Tennyson.)
Closing his heart, the Judge rode on,   (Whittier.)
As a lobster might have done.   (Hood.)"

The second query regarding the origin of the old phrase, "as difficult as to give the first cost of a lobster," according to "Notes and Queries," originated in the House of Representatives during the bitter war over protective tariff between John Quincy Adams and Andrew Jackson, in 1829, when the latter was elected in opposition to what was

PROBLEM

This Puzzle Will Interest Every Young Man Who Ever Bought a Lobster and Every Girl Who Ever Ate One.

known as the "American system."

During a debate regarding the placing of a tax upon the first cost of raw material a Representative of one of the Eastern States wished to know how they would calculate the first cost of the lobster, which was doubtless an important branch of Eastern commerce, and the phrase came one of ridicule against the protectionists.

Having mastered the historical features of the problem let us now discuss the puzzle, which seems to have remained unanswered for nearly three-quarters of a century, which is to get at the first cost of a lobster. The information cannot be obtained in the ordinary way, because their vocation makes the dealers sell-fish (N. B.—That is a joke), so they give nothing away.

All I could discover was contained in the fact that the original lobster catchers receive as much for six dozen lobsters as they get lobsters for thirty-two shillings. The problem, therefore, remains as of yore, What is the first cost of a lobster? A prize of $5 will be paid for the best answer received within two weeks. SAM LOYD, New York Journal.

A VERY PUZZLING REAL ESTATE DEAL.

A MAN and his wife agreed to purchase a house with their joint money, but when it came to the question of taking the property, which was to cost $1,200, the wife insisted that the title should be made in her name, whereupon the husband got angry and said: "If you will loan me two-thirds of your money I will have just enough to buy the property myself." "I will do no such thing," replied the good wife. "It was agreed that the house was to be mine, but if you will contribute three-quarters of what money you have I will furnish the rest." The question is to tell just how much each of them had.

How the Furniture Was Bought on Instalments.

IN that story of the housewife who purchased $75 worth of furniture by paying $5 down and the balance at the rate of $5 per month, but who could have settled the bill for $65 cash, it was required to know just what interest she was paying for the use of the money.

It was said that it was a confusing problem for the average person, but who would have thought that it has completely baffled our corps of puzzlists, mathematicians and expert accountants, who are supposed to be familiar with such ordinary transactions? Some went so wide of the mark as to claim that the $10 represented interest on $75 for fifteen months! Others that it was for fourteen months, and some that it merged into a question of partial payments, which would average for seven months. As I find myself arrayed against an army of mathematicians and puzzlists, who solve this problem according to established rules, I wish to say that I do not consider it a question of algebra or mathematics, but a business transaction to be analyzed by the facts in the case.

The terms called for a cash payment of $5 down to begin with, then the purchaser may complete the transaction by a further spot cash payment of $60, or by fourteen monthly instalments of $5 each. It is evident that the purchaser would have to pay $10 for the use of that $60, so let us see how long she has the use of it. She has $60 for one month, $55 for the next month, $50 for the next, $45 for the next, $40 for the next, $35 for the next, $30 for the next, $25 for the next, $20 for the next, then $15, $10 and $5, making in all $390 for one month, for the use of which she is now to pay $10, which would be at the rate of $120 for a year, which would be paying interest at the rate of 30.769 per cent for the use of the money, which is the correct answer to the problem from a business standpoint. Take the sums decreasing from $30 down to $5 and computing one month's interest on each at 30.769 per cent interest and it will amount to the $10 which the purchaser then has to pay for not having put down that $60 spot cash. The question at the time

of the two last payments of this $10 interest does not concern the problem, which was to determine what rate of interest the purchaser pays for the use of the money. $390 for one month is equal to $32.50 for a whole year, the interest on which at 30.769 per cent would amount to $10.

The problem was based upon an ordinary business transaction, as practiced in every city of the United States and with which every one is supposed to be familiar. The question has often been asked and as often answered in the press, and yet none of our puzzlists solved it properly, and I have never seen the correct answer published. These things occur frequently.

THE SILK PROBLEM ANSWER.

HAVING explained how the silk manufacturers have introduced the custom of selling silk thread by length and strength, irrespective of weight or bulk, so as to prevent adulteration, it was asked: Which is the cheapest, to buy 750 yards of 9 pound strength thread for $1, or 975 yards of 8 pound strength thread for $1.25? It was explained that the strength meant that the thread would be able to sustain that number of pounds weight without breaking.

It seems to be just as contrary to the rules of mathematics to multiply the yards by the number of pounds as it would be to attempt to multiply $10.50 by $2.90, and yet we are compelled to multiply something by something else despite the mathematical professors to the contrary, for 750 yards of 9 pound strength

representing 6,750 units of strength for cheaper as 6,750 exceeds 6,240. The former is 7 5-9 per cent cheaper, which $1, while 975 yards of 8 pound strength answer was not given by any of our would be 7,800 units of strength for mathematicians or silk merchants who $1.25, or 6,240 units of strength for $1, attempted to unravel this puzzling so the 9 pound thread is as much skein.

Answer to the Problem of the Surprised Chick.

IN the fable of the precocious chicken which felt that it was hatched with a mission to reform things and to become an agitator, or more probably a broiler, the problem of the puzzle was contained in the concluding lines, when it asks:

"What chance have I—in a brood of twenty—
To get a bite? Though smart as any two!"

when, as subsequently explained, the rooster claims a royalty of one-half for scratching, and the hen a half of the remainder for hatching, which leaves just twenty-five out of every one hundred to be divided among the "brood of twenty." Our little agnostic friend, however, claims to be as "smart as any two," which led some of our mathematical friends into the error of thinking that he would get two twentieths of twenty-five, and who gave their answers accordingly.

Out of every 84 worms caught the rooster would get 42, the hen 21, the irrepressible little reformer 2, and each of the nineteen others but 1. The answer therefore would be 2 worms out of every 84, or 1 out of every 42, which would give but half a worm to each of the other little chicks. Several puzzlists are to be complimented upon discovering the trick of the problem, and I shall divide the prize between the following two correspondents for the clever way of describing the two answers. MRS. WILLIAM FINK, of Lemoyne, Pa., says:

"The little discontented chicken would merely get his due,
For in the share of good things he gets one in forty-two.
Where Pater's halves and Mater's quarters
Left ten and one-half for sons and daughters.
This chick, who ate like two, would run
And make their shares like twenty-one.
Then, slyly, with his worm, he'd laugh,
For the slower chicks would get but half."

GORDON GORDON, a letter carrier of Troy N. Y., speaks as follows for the rest of the brood:

"Of chickens all there were twenty-two.
Counting Daddy and our Mother,
All happy as larks which sing in the sky,
Excepting our one selfish brother.
For when we were fed with good things to eat,
Daddy, for his share, took half of the meat,
Dividing the rest, in two piles so neat.
Why, what was our chance with that brother,
Who always got two while we got one?
His two and our nineteen made twenty-one,
And as dad got the same, so what could we do,
And so dad got the same, so what could we do.
As twice forty-two is in all eighty-four?
He got just two out of that, and no more."

which answer tallies with the other as far as worms are concerned.

AN AGE RIDDLE IN RHYME.

HERE is an odd little piece of doggerel which appeared in the Gentleman's Magazine a hundred and fifty years ago, which gave rise to considerable discussion. Correspondents seem to have been pretty evenly divided between those who claimed that there were several answers and such as maintained that the problem was unsolvable:

When first the marriage knot was tied
Betwixt my wife and me
My age did hers as far exceed
As three times three does three;
But when ten years and half ten years
We man and wife had been,
Her age came up as near to mine
As twice four is to sixteen.
Now, tell me, Captain David Gray, I pray,
What were our ages on the wedding day?

(David Gray was a noted writer on mathematical subjects who lived at that time.)

THE PUZZLE THAT BAFFLED THE ANTIQUARIAN.

HERE is a sketch of what appears to be a very ancient tombstone, which for several centuries has puzzled the good citizens of Littlewick Meadow, a pretty rural village in Surrey, just away from London.

Many attempts have been made by noted antiquarians and archaeologists to decipher the inscription, which by general assent has been ascribed to the time of the early Normons, under William the Conqueror.

Many guesses as to the meaning, based upon the Norwegian, Scandinavian and French words, have been made according to ancient writers, but it has fallen to the lot of a distinguished puzzlist, who has recently taken up his residence in Littlewick Meadow, to prove that there is an easy and simple translation to the puzzle. How many of our clever wits can solve the problem by giving a perfect and satisfactory reading, which will tell the solver when he has mastered the mystery. It not only gives a satisfactory answer to the puzzle, which shows that the noted archaeologians have been on the wrong track, but it also gives an approximate date of the writing of the inscription which conforms to the requirements of an old English law, now obsolete.

As the puzzle really possesses no difficulty whatever, I shall expect many answers from our young friends, while at the same time I remind the children of an older growth that these simple puzzles are utilized in deciding the awards, when there are ties upon the more difficult problems, so they had better resume their custom of thing in sight.

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CAN .... LVE THIS INTRICATE ARCHAEOLOGICAL MYSTERY!

THE MILLER AND HIS TOLL.

AS our grammar school scholars are somewhat rusty after their long Summer vacation and may want a little exercise to put a working edge to their wits, I will ask them to solve the following little mental problem:

A certain miller takes for "toll" one-tenth of the meal or flour he grinds from the grain the farmers bring to him. What quantity must be ground in order that a customer may have just a bushel of meal after the toll has been taken?

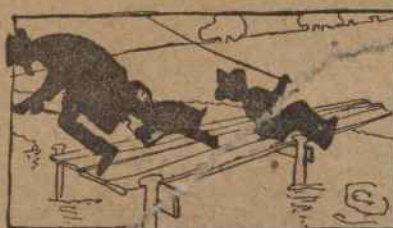
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CAN YOU NAME THIS NOVEL?

AIMING to illustrate the various phases of puzzledom, so as to interest all in the practice of solving and originating every manner of problem, it is well at times to take a look at some of the old-style puzzles, which in their day were accounted as being exceptionally clever.

Here is the way that an ingenious puzzlist would write the name of a popular novel?

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500SEIOOOE.
What was the name of the book?

S. A. RANDALL, of Phoebus, Va., P. O. Box 374, is the Winner of No. 3 of the What-Happened Series. The Picture is Herewith Given.

HOW THE EGYPTIAN WOMAN SAVED HER CHILD.

NO puzzle collection is complete without an illustration of the paradoxical problems, based upon false reasoning or logic, ascribed to the ancient Greek and Egyptian philosophers; so we will take as a sample that well-known story of the crocodile that lost a good meal by playing smart, generally accredited to Aesop.

He tells how a crocodile which had just swallowed a nurse maid and was preparing to eat the child as a finishing relish to a capital meal, was addressed by the frantic Egyptian mother, who promised to give two plump little slaves on the morrow if the crocodile would spare her child.

"Couldn't think of such a proposition," said the cruel monster, "but I will tell you what I will do. I will agree to return the kid if you will mention any proposition which I could not accept if I wanted to."

It was a very common thing for animals to converse in those days and, according to Aesop, they were very punctilious about keeping their words, so the conceited crocodile had to admit that he was fairly cornered when the mother exclaimed: "Then I propose that you give me back my child." If he accepted the proposition he

had to give back the child, and if he did not accept the proposition he would not be fulfilling his boastful offer and would be compelled to restore the child according to the terms of his agreement. The more he looked at it, the more his eyes got twisted, which accounts for crocodiles being so cross-eyed.

This can hardly be looked upon as a puzzle which calls for an explanation or answer, and yet it is interesting as being the original of a species of paradoxical logic upon which many perplexing queries have been based.

"THEN I PROPOSE THAT YOU LET ME KEEP MY CHILD."

THE ORIGINAL LOBSTER CATCHERS RECEIVE AS MUCH FOR SIX DOZEN LOBSTERS AS THEY GET LOBSTERS FOR THIRTY-TWO SHILLINGS. THE PROBLEM, THEREFORE, REMAINS AS OF YORE, WHAT IS THE FIRST COST OF A LOBSTER?